PATENT SPECIFICATION

Convention Date (Germany): Mar. 6, 1920.

160,144

Application Date (in United Kingdom): July 10, 1920. No. 20,736/20.

Complete Accepted: Sept. 15, 1921.

COMPLETE SPECIFICATION.

Traction Wheels for Traction Engines.

We, FRITZ HAYN, Manager, of Erfenschlag, near Chemnitz, i.S., Germany, and ERNST EMIL FREYLAG, of Zwickau, in Saxony, Germany, both citizens of the German Republic, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a traction wheel for traction engines, said wheel being provided with spokes, which consist of several layers of leaf springs and which terminate in walking shoes, grippers or the like.

The invention consists therein, that the walking shoes or the like are pivotally connected to the resilient spokes and are capable of an oscillating movement in relation to the spokes, under the control of the leaf springs, of which the spokes are composed.

By this novel arrangement a turning of the shoe around its pivot pin and accordingly an adaptation of said shoe to the surface of the soil and also an elastic treading upon the latter is enabled, whereby the natural manner of locomotion, as effected by man and beast, is approximately attained.

In the accompanying drawing, in which two embodiments of the subject matter of our invention are illustrated,

Fig. 1 is a side view, partly vertical section, of our improved wheel.

Fig. 2 is a cross section through one spoke on line A—A of Fig. 1.

Fig. 3 is a section on line B—B of Fig. 1 and

Fig. 4 is a side view, partly vertical section, of another form of construction of our improved traction wheel.

[*Price* 1/-]

The first form of construction, illustrated in Fig. 1—3 is arranged as follows:

The wheel hub 1, which is secured by means of the disk 2, to the driving shaft 3, is provided with a plurality of box-shaped parts 4, which receive the leaf springs 5, 6, 7, 8, 9 and 10, of which the spokes are composed. The leaf springs which are united into a spoke, are secured to the wheel hub in such a manner, that the leaf springs with their inwardly directed ends are introduced into the box-shaped parts 4 and each of the latter is then closed by a cover 11 (Fig. 3), the projection 12 of which engages into a corresponding notch 13 of the leaf springs.

The main spring 8 is supported by the leaf springs 9, 10 and with the outer end takes around the pivot pin 14, which is mounted in the longitudinal walls 15, 15 of the shoe 16; the leaf spring 5 however, which is supported by the leaf springs 6, 7 terminates into a bent end 17, which engages with a roller 18. The latter is rotatably mounted upon the pin 19, which is secured to the longitudinal walls 15, 15 of the shoe.

When the traction wheel rotates in the direction of the arrow (Fig. 1) and the shoe has not yet touched the soil (see left hand of Fig. 1), the springs 5, 6, 7 are only slightly tensioned, so that the shoe is merely retained in its temporary position and does not clatter.

As soon as the shoe has reached the soil and treads upon the same (see center of Fig. 1), said shoe is oscillated around the pivot pin in the direction of the watch hand. This oscillating movement causes, that the roller 18 moves along the leaf spring 5 and forces the same gradually

305-5

BRITISH

160,1

160,144 COMPLETE SPECIFICATION

1 SHEET

2023

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

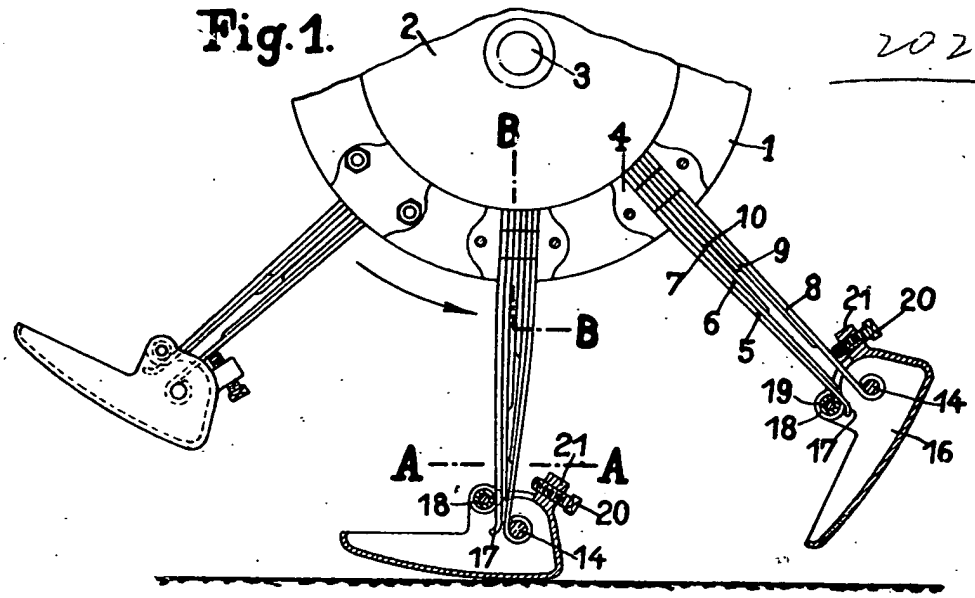


Fig. 2.

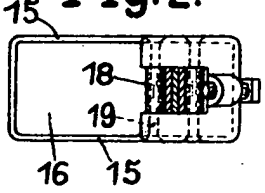


Fig. 3.

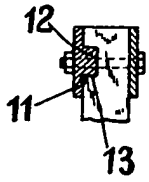
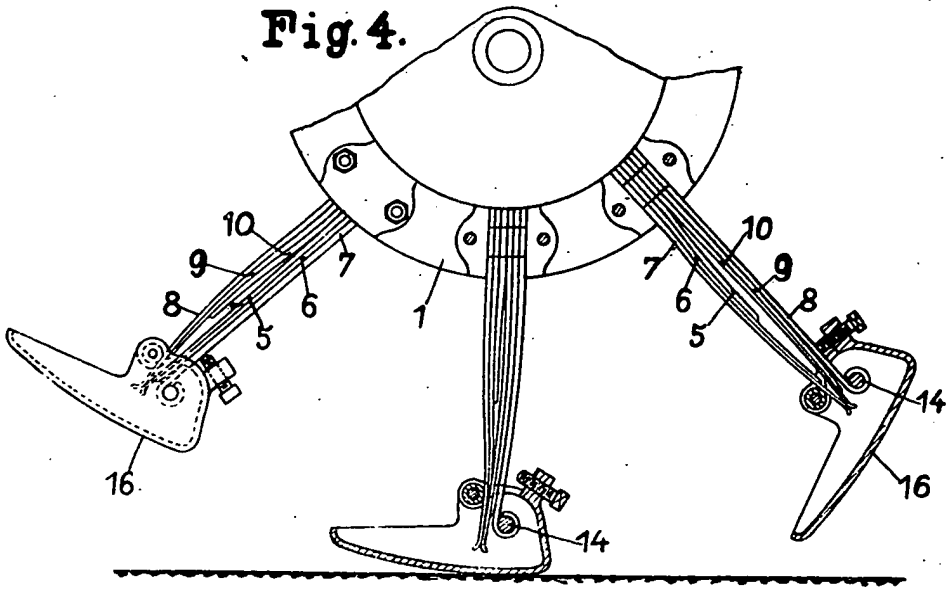


Fig. 4.



Malby & Sons, Photo-Litho